

Minutes of the SD/TJ Air Quality Task Force Meeting
held 10/10/2007 in National City, CA

Attendees:

Domingo Vigil	San Diego County APCD
Monica Tamayo	State of Baja California Environmental Protection Secretary
Amelia Simpson	Environmental Health Coalition, Border Environmental Justice Campaign
Paula Stigler	Pala Indians
Michelle Vazquez	Environmental Health Coalition
Israel Flores	State of Baja California Environmental Protection Secretary
Jenny Quintana	SDSU, Graduate School of Public Health
Hiram Sarabia	UCSD, Superfund Basic Research Program
Dimitri Smith	CARB
Fernando Amador	CARB
Jose Carmelo Zavala	CIGA
Syndi Smallwood	Pechanga Band of Luiseño Indians, Environmental Director
Helen Rain Waquin	Pechanga Band of Luiseño Indians
Dave Fege	US EPA (Border Office)

Welcome remarks and presentations

Paula Stigler, the tribal representative to this task force, began the meeting by welcoming everyone to the meeting and by asking everyone to introduce him/herself.

Minutes approval and announcements

The members approved the minutes from the last meeting.

Fernando Amador informed that the State Air Resources Board had recently approved the State's strategy to improve air quality. It focuses on curbing pollution from mobile sources (cars, ships, heavy-duty trucks, large off-road equipment and locomotives) that

generate 90% of the State's NOX. Also, on October 19th, ARB will hold a public workshop in San Diego to discuss the proposed regulations to reduce emissions from heavy-duty trucks, known more commonly as the Private Fleet Truck Rules. More info. available at the ARB website. To those interested in Climate Change, ARB just released its final staff report on the expanded list of early action measures to reduce greenhouse gas emissions in CA, this is also available at the ARB website.

Michelle Vazquez reported that EHC has been working with community members of the Chilpancingo neighborhood to measure ultra-fine particles in the air using P-track at two sites: the City Government Offices, and outside the elementary school at the neighborhood. There are some events, such as trash burnings and the exhaust of tractor-trailers that make matters worse. The EHC is hoping it can work with the groups from the Border 2012 Program.

Prof. Jenny Quintana reported that in conjunction with Dr. Guillermo Ventura from UABC, she has been working on a study measuring the air pollution inside cars that cross the US-Mexico border. The goal is to measure the levels of pollutants that people are breathing when they are sitting in their cars waiting to cross the border. So the expected increase in border wait times is not only an economic risk, it is also a health hazard. They are measuring particulate matter (PM 2.5) and ultra-fine particulate (black carbon and poly-aromatic hydrocarbons bound to particles). They too are using P-tracks, and ethomometer. Some participants in the study pick-up the equipment at the UABC, cross the border, and then drop it off at SDSU, and visa-versa. This study is funded by USEPA through the SCWERP mechanism. In the future the study will measure the levels of pollutants that pedestrian border crossers are exposed to during long waits. The whole study is projected to be finished anywhere between April and June. Israel asked whether they have control samples (i.e., inside cars that are not crossing the border). The devices start out low at UABC but start climbing slowly and peak at the border. Carmelo Zavala indicated that the inspector booths at the border have controlled air.

Israel indicated that they have had a hard time trying to cross air monitoring equipment through the border but that there has been a recent law granting any person or company permission to bring across equipment for pollution prevention.

Updates

San Diego/Tijuana Clean Diesel Demonstration Project

The first project update was by Domingo Vigil. The truck retrofit project has been going on about two years. The Otay border crossing is the largest commercial crossing point along the California-Mexico border. There has been an increase in truck crossings; presently, there are 2500 trucks that cross the Otay POE a day and there are 1.4 million truck crossings/yr. The diesel emissions from these trucks affect the surrounding communities by contributing to asthma, cancer and bronchitis. The purpose of this project is to demonstrate the viability of diesel emission control retrofits on heavy-duty diesel trucks operating in this region. The goals of the project are to create a market for cleaner diesel concepts, accelerate the delivery of low sulfur diesel in the border region, to build important business partnerships, to improve border air quality and to provide an important tool to Mexico in its implementation of similar cleaner diesel projects. The project is funded by the USEPA and is administered by the SDAPCD. To get the participants the APCD, the Mexican Trucking Association, and Mexican Customs organized a workshop in Tijuana to educate the trucking industry about the project. Fifty heavy-duty Mexican trucks that cross the border were retrofitted with diesel oxidation catalysts (DOC) and crank case filtration systems (Spiracles). The trucks are models 1988 or newer. Ironman Parts and Services is the provider and installer of the equipment. Donaldson manufactures the spiracles. The combination of equipment reduces particulate matter in at least 25%, CO and ozone forming hydrocarbons by 40 – 50%, and they destroy large fractions of cancer causing emissions. DOCs don't require maintenance, the spiracle is mounted on the engine and it eliminates over 90% of crank case emissions, it improves air quality in the cabin and it reduces oil consumption by 2-6 gallons/yr/engine. Spiracles have a filter component that should be changed with each oil change. Trucks do not need to use ultra low sulfur diesel. It costs \$3500 per truck to purchase and install the equipment. The emission reductions will depend on the number

of miles driven, but for all fifty trucks there will be a reduction of at least a fourth of a ton/yr. No problems to date have been observed with the DOC, however, the Spiracle filters need to be changed quite frequently, at least at every oil change. A second phase of the project is to demonstrate clean freight strategies on trans-border heavy-duty commercial diesel trucks in the San Diego – Tijuana region. This project is being duplicated in the Calexico -Mexicali area but only for 12 trucks. Presently, the USEPA and SEMARNAT are working to develop a border wide clean freight program.

Environmental Brick Kiln Project

Israel gave a presentation on the brick kilns in Baja California. Brick making is a common practice along the border. By way of background information, EPA region 6 required EL Paso Energy to reduce its emission. Unable to do so, they had the option to invest in another way to achieve emission reductions. They invested in a brick kiln research project. They will build 60 two chambered brick kilns in the Ciudad Juarez area; presently they've built around 30. In 1999, SEMARNAT counted the number of brick kilns in the border region; there were 210 brick kilns in Baja California, but the number of kilns has since increased to 260. In the old manufacturing process, adobe bricks on all sides except for the top surround a pyramid of bricks or tiles. There are also holes on the bottom, which is where the wood (approximately 1 ton/pyramid of bricks) is burned. The burn time varies between 8 and 24 hours and the cool down time is from 1 to 2 days. Then the adobe walls that surround the bricks are taken down and the bricks are ready to be loaded onto trucks to be sold. The wood burning affects the air quality and this type of kiln wastes heat. The old kilns emit anywhere from 25 to 50 kg of particles/hr, the new kilns emit only 5 to 15 kg/hr (up to 85% particle reduction and 40 – 50 % reduction in combustion gases). In addition, they don't require as much wood as fuel (only use 30 to 50% of the wood the old kilns use) and it reduces the amount of wasted end product. This task force received \$40,000 to build 4 brick kilns in the Baja California area as a demonstration project. It was difficult to find volunteers for the project as they were reluctant to change their traditional manufacturing process. Given that the brick manufacturers in Juarez didn't seem to value the kilns because they were entirely free to them, the brick manufacturers here were asked to contribute to the

building materials in hopes that they would value them and would want to continue using them. Emission tests will be conducted in the new kilns and these tests will also serve as a learning opportunity for the brick makers in the coming weeks. Future plans are to request more funds to extend the project to the Algodones and Mexicali areas. It would be a good idea to monitor the health effects of the new brick kilns in the surrounding community. A suggestion was made to try to include the brick manufacturing leaders in this project in order to make the rest of this sector feel more comfortable in participating in the project.

Presentations and Ideas for Border Projects

EPA 2008 Border Funding Process

Dave gave an update on the funding process for the Border 2012 Program. The task force has a major influence on the decisions made by the Border 2012 partners (EPA, SEMARNAT & CA and BC State Governments) as to which projects will receive funds. The EPA is restricting the flexibility in awarding funds. The BECC is the leading organization for funding in the sense that the funds will go to the BECC and they will distribute the funds to the different projects that have been chosen by EPA, BECC, the States and Mexico. Since the BECC is a binational organization, it can spend US funds in Mexico. The BECC will continue to work closely with the regional group and the EPA as to deciding on proposals. The regional group is composed of the deputy regional administrator in San Francisco, the Secretary for the Baja California Environmental Protection Agency, the Secretary for CalEPA and the SEMARNAT Delegate, who get together once a year but whose staff, in their representation, make the decisions. There are three steps to the process: **First**, to identify the regional priorities (Baja California and California, is one of four border regions) that have been set by task forces, tribes, regional members, and any other individual who wishes to contact Border 2012 partners. **Second** is the solicitation. The BECC will send a notice to all the task force co-chairs, Border 2012 partners, and tribes indicating the priorities that were identified and soliciting project proposals. The proposal doesn't necessarily need to indicate who will do the project. The EPA will help find someone (University, State, or private firm) to do the project itself. The period for solicitations is January thru May. The **third** step is

project proposal evaluation by BECC, the Regional Workgroup and the EPA. The BECC and the EPA make the final selection, and the target selection date is August 1st.

The amount for each project will vary between 50 to 100 thousand dollars/project. Only projects that fit under those priorities will receive funds from EPA. The decisions will be made by November 30th. EPA believes high priorities are:

1. To continue to work on reducing diesel emissions from mobile sources
2. Energy efficiency to reduce emissions from power plants
3. Look into bio-fuel conversion
4. Road paving (reduction of PM 10)
5. Reducing greenhouse gases

Based on these suggestions it seems it will be very difficult to obtain funds for activities such as conferences or environmental education since these activities do not directly reduce emissions. There are 14 task forces in the CA/BC and Sonora/Arizona regions and they will all be competing for funds. The EPA doesn't have a budget yet but last year there were \$450 thousand for funding projects. Projects can be funded in conjunction with other funding sources, although there needs to be a funding mechanism.

Overview of past funded projects

Last year the proposals that received funds were the following:

Diesel Truck Retrofit Program in Tijuana and Mexicali

Smart Way Demonstration Project in Tijuana

Biodiesel obtained from waste grease in Mexicali

Solar Water Heaters for Dry Cleaners in Mexicali

Brick Kiln Project

Air Monitoring Program

Baja California Real Time Website

Imperial Valley Real Time Website

Retrofit Workshop

Ideas for Air Projects in the San Diego/Tijuana border

Brainstorm of project ideas in the San Diego/Tijuana region:

- Spread information about Air Quality (Continuity to the Real Time Air Quality website, go further than just a website). Make sure the public in general knows what the colors mean.
- Efficiency in energy consumption, not just in energy production
- Measure emissions of volatile organic compounds in Tijuana
- Formation of an environmental education group or task force
- Make sure that all the projects are completed (environmental/health impacts, outreach, results, etc)
- Ranking of emissions according to their health impacts
- Measure the exposure to vehicle emissions while crossing the border
- Paint spray booths (?)
- New technology to measure PM
- Agricultural burns

In response to the question of how are the emissions ranked, Dave responded that Mexico has a National Emissions Inventory in addition to the inventories for Tijuana and Mexicali, although these last two inventories need to be updated. Usually, the highest ranked emissions are NOX, PM10 and those that come from mobile sources. Israel informed that Baja California has recently received from the Mario Molina Center the preliminary data for the greenhouse gas emission inventory and they expect to have the final report in November. California also has a greenhouse gas emissions inventory, and Sonora and Arizona have funds to work on a greenhouse gas emissions inventory. Apparently, Scripps is doing a local San Diego greenhouse gas emissions inventory. Another thing to consider are aerial depositions onto water bodies of heavy metals, which might figure into TMDO calculations. Dave indicated that cross media projects would probably be more successful at obtaining grants. Tribes don't have to go through the task force to propose projects, as they will have a separate process through which to participate.

Task Force Meeting Survey

All were asked to fill out the survey for meeting improvement.

General Issues

- The newsletter has two articles on air quality. The first one is on the inventories and the second one has to do with the transfer of the air monitoring network from ARB/EPA to SPA. Also, the list of Task Force co-chairs and their contact information is in the newsletter.
- There will be a workshop on spent lead acid batteries.
- The Border Energy Forum will soon be held in San Diego
- Bill Powers authored a report (Sunrise Power Link) on how to reduce energy costs to be released on October 18th
- UC Davis and CARB have done an assessment of out of state truck activity in California, study promises to be interesting.
- On September 28th Mexico published a law on Non Hazardous Waste Management. It is geared to having proper management and treating it as a potential source of renewable energy.
- There was a suggestion to video tape the meetings and post them on the website so that those who are unable to come can watch them and be up to date.

The EHC will be asked to come to the next meeting to hear their presentation.

The next meeting will be on January 9th in Tijuana, location TBD.